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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,497	04/11/2006	Seok Joon Moon	09717.0060USWO	7085

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EXAMINER
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CHOWDHURY, AFROZA Y

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
10/29/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/538,497

Applicant(s)

MOON ET AL.

Examiner

Afroza Y. Chowdhury

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/4/2005</u> .   | 6) <input type="checkbox"/> Other: ____                           |

## DETAILED ACTION

### *Drawings*

1. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, "**end portions of the sustain electrodes located opposite to receive scan signals in the scan electrode form a common electrode**" is not clear. It is not clear that end portions of sustain electrodes located opposite to what?

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Applicant Admitted Prior Art** (herein after AAPA) in view of **Song et al.** (US Patent, 6,340,960)

As to claim 1, AAPA teaches a plasma display panel for a multi-screen, comprising: a plurality of unit plasma display panels wherein a front panel whereon a sustain electrode and a scan electrode are formed is sealed with a rear panel whereon an address electrode is formed (fig. 1, paragraphs 1<sup>st</sup> – 7<sup>th</sup>, in background art).

AAPA does not teach end portions of the sustain electrodes located opposite to receive scan signals in the scan electrode form a common electrode, and the sustain electrode is configured to receive the sustain signal from the common electrode a plasma display panel.

Song et al. discloses a plasma display panel wherein end portions of the sustain electrodes (fig. 13(301)) located opposite to receive scan signals in the scan electrode (fig. 13(111, 121, 131, 141)) form a common electrode (fig. 13(300), col. 12, lines 10-

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23), and wherein the sustain electrode is configured to receive the sustain signal from the common electrode (col. 6, line 66 – col. 7, line 10).

Therefore, it is obvious to one skill in the art at the time of the invention was made to incorporate the plasma display panel of Song et al. into the multi screen PDP of AAPA to make a wide screen plasma display device in order to reduce manufacturing cost.

As to claim 2, AAPA (as modified by Song et al.) teaches a plasma display device where the sustain electrodes are connected to a common electrode (fig. 13(300), col. 12, lines 10-23, in Song et al.).

AAPA (as modified by Song et al.) does not teach each of the common electrodes of the sustain electrode of at least two or more plasma display panels is connected in common and each of the plasma display panels receive the sustain signal in common.

Therefore, it is obvious to one skill in the art at the time of the invention was made to include the plasma display panel of Song et al. into the multi-screen PDP of AAPA to make wide screen a plasma display device wherein each of the common electrodes of the sustain electrode of at least two or more plasma display panels is connected in common, and each of the plasma display panels receive the sustain signal in common in order to reduce power consumption.

As to claim 3, AAPA (as modified by Song et al.) teaches a plasma display device where the sustain electrodes are connected to a common electrode (fig. 13(300), col. 12, lines 10-23, in Song et al.).

AAPA (as modified by Song et al.) does not teach a PDP where the common electrode is formed on a sidewall of the front panel.

However, it is an obvious design choice of making a PDP where the common electrode is formed on a sidewall of the front panel located in a place adjacent to different plasma display panels.

As to claim 9, AAPA (as modified by Song et al.) teaches a plasma display device where the sustain electrodes are connected to a common electrode (fig. 13(300), col. 12, lines 10-23, in Song et al.).

AAPA (as modified by Song et al.) does not specifically teach a display panel wherein the common electrode is formed on a sidewall of the front panel located in a place adjacent to different plasma display panels.

However, it is an obvious design choice to make a PDP wherein the common electrode is formed on a sidewall of the front panel located in a place adjacent to different plasma display panels.

6. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Applicant Admitted Prior Art** (herein after AAPA) in view of **Moon** (KR Pub. 1019980075059).

As to claim 4, AAPA teaches a plasma display panel for a multi-screen, comprising: a plurality of unit plasma display panels wherein a front panel whereon a sustain electrode and a scan electrode are formed is sealed with a rear panel whereon an address electrode is formed (fig. 1, paragraphs 1<sup>st</sup> – 7<sup>th</sup>, in background art).

AAPA does not teach both ends of the sustain electrodes are connected in common to a first common electrode and a second common electrode, and a sustain signal is simultaneously applied to both ends of the sustain electrodes in a plasma display panel.

Moon discloses a plasma display apparatus wherein both ends of the sustain electrodes are connected in common to a first common electrode and a second common electrode, and wherein a sustain signal is simultaneously applied to both ends of the sustain electrodes (fig. 5, abstract, structure and operation (line 69), claims 1-2).

Therefore, it is obvious to one skill in the art at the time of the invention was made to incorporate the plasma display apparatus of Moon into the multi-screen PDP of AAPA to make a wide screen plasma display device in order to minimize waveform distortion and reduce power consumption.

As to claim 5, AAPA (as modified by Moon) teaches a plasma display apparatus wherein both ends of the sustain electrodes are connected in common to a first common electrode and a second common electrode, (fig. 5, abstract, structure and operation (line 69), claims 1-2).

AAPA (as modified by Moon) does not teach a third common electrode connected to one of the first common electrode and the second electrode.

However, it is an obvious design choice to make a plasma display panel comprising a third common electrode connected to one of the first common electrode and the second electrode in an opposite position where a scan signal is applied to the scan electrode, and extended to the position whereto the scan signal is applied in order to further improve display quality.

As to claim 6, AAPA (as modified by Moon) teaches a plasma display apparatus wherein both ends of the sustain electrodes are connected in common to a first common electrode and a second common electrode (fig. 5, abstract).

AAPA (as modified by Moon) does not teach a third common electrode connected to the first common electrode and the second electrode to each other.

However, it is an obvious design choice to make a plasma display panel with a third common electrode for connecting the first common electrode and the second electrode to each other to minimize waveform distortion.

As to claims 7 and 8, AAPA (as modified by Moon) teaches a plasma display apparatus wherein both ends of the sustain electrodes are connected in common to a first common electrode and a second common electrode (fig. 5, abstract).

AAPA (as modified by Moon) does not teach a third common electrode that is formed to have a broader width than that of the sustain electrode.



However, it is an obvious design choice to make a plasma display panel where a third common electrode is formed to have a broader width than that of the sustain electrode in order to have a low impedance.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afroza Y. Chowdhury whose telephone number is 571-270-1543. The examiner can normally be reached on 7:30-5:00 EST, 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC  
10/23/2007

  
AMARE MENGISTU  
SUPERVISORY PATENT EXAMINER